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Self-care techniques for acute episodes of low back pain

Margareta Nordin PT, Dr. Sci.

Research Professor
Departments of Orthopaedic and Environmental Health Sciences, School of Medicine, New York University, New York, New York, USA

Director

Sherri Welser PhD

Senior Manager of Psychological Services

Marco A. Campello PT, MA

Clinical Associate Director

Markus Pietrek MD, PhD

Fellow and Instructor

Occupational and Industrial Orthopaedic Center, Hospital for Joint Diseases Orthopaedic Institute, Mount Sinai NYU Health, (OIOC/HJD/NYU), 63 Downing Street, New York, New York, 10014, USA

Guidelines recommend minimal medical intervention for acute non-specific low back pain. However, patients often request strategies to reduce symptoms and recover quickly. Self-care techniques that do not contradict current evidence-based recommendations may be suggested. Self-care techniques can reduce costs and iatrogenic complications that can occur with medical treatment. They may also increase the patient's perception of control and improve long-term outcome. A shift in paradigm for the health care provider and the patient is required for self-care to be successful. These issues, as well as self-care approaches such as medication, exercises, modalities and mind–body techniques are discussed. Practice points for each approach are given.

Key words: acute non-specific low back pain; self-care; mind–body techniques; exercises; modalities.

INTRODUCTION

Up to 80% of adults have had at least one episode of low back pain during their lifetime. Clinicians and researchers have dichotomized low back pain as specific or non-specific. Specific back pain indicates spinal pathology such as fracture, tumour, infection, cauda equina syndrome or systemic diseases, which are often called Red Flags.[1] Specific diagnoses also include non-spinal conditions such as vascular, abdominal, urinary or

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pelvic pathology causing referred back pain. Non-specific low back pain (NSLBP) is pain that occurs in the absence of red flags and any other referred conditions. NSLBP usually resolves spontaneously within 1 month.[1,2] However, it is unclear how often and how disabling recurrences are in the population at large.

Despite efforts to reduce its impact, NSLBP remains a growing problem in Western cultures. Recent evidence-based guidelines for the management and treatment of low back pain have suggested that minimal medical intervention is necessary in the majority of cases of acute (duration up to 1 month) NSLBP.[1,3] For example, guidelines advise that the resumption of normal activities should be encouraged and non-prescribed or over-the-counter medications (OTCs) should be used as needed in the acute phase of a NSLBP episode.[1,3,4] However, many NSLBP patients continue to seek treatment from health care practitioners that may be unnecessary or even harmful. Over-treatment can result in a 'validation' of the back problem as a serious disorder that becomes increasingly hard to challenge. It is contended that the recommendation of self-care for early low back pain can prevent these problems and teach the patient life-long habits that may control future episodes of pain.

SHIFTING PERSPECTIVE

Minimizing medical intervention involves important philosophical shifts on the part of the individual with NSLBP as well as on the part of the health care practitioner. Patients must change their perception of NSLBP as a serious disorder requiring the attention of a health care professional to a common disorder that is self-limiting. Such a change in perception would put the emphasis on alleviating symptoms and preventing future episodes instead of the often-fruitless search for aetiology. The health care provider must also view the problem in a new way. A professional who is trained to heal may have difficulty relying on the patient's own ability to self-heal. Yet this shift must occur if it is to be conveyed to the patient in a convincing manner. Understanding the advantages of self-care is necessary to facilitate a change in philosophy.

Advantages of self-care techniques

Teaching patients to manage their own back pain is desirable for several reasons. Reducing health care visits can diminish the risk of iatrogenic complications, alter the individual's beliefs about NSLBP and significantly reduce the costs associated with low back pain.

Iatrogenic complications

The risk of complications from medical treatment can vary from mild to severe. For example, pain medications may cause unpleasant side effects and injections can lead to infection. Some of these risks can be avoided by encouraging the patient to engage in self-care.

One of the most potentially damaging side effects of medical treatment is negative or inaccurate information given to the patient by the health care provider. Such information forms the basis of the patient's beliefs about their medical status. Failure to describe the natural history of low back pain and to minimize the severity of the disorder can cause anxiety, depression and fear of movement.[5,6] This is often the prelude to chronicity.

Studies have found that most health care providers address only medical issues at the first encounter and do not adequately address the patient's concerns.[6,7] The potential impact is dissatisfaction with the provider. The patient may thus seek care elsewhere or become a 'treatment shopper' until a satisfactory relationship is obtained. Another potential outcome is that the patient does not fully understand or adhere to treatment. Suggestions for improving communication between health care providers and patients are given at the end of this chapter.

Back pain beliefs

Beliefs about health are important in the course and outcome of low back pain.[8] Self-care promotes the view that individuals have control over their back pain. Research has found that active approaches are superior to passive modalities for NSLBP. This may be moderated, in part, by feelings of control. It has been shown that individuals who perceive that they have control over their low back pain and the ability to affect the necessary behaviours have better outcomes than those who do not.[9]

A belief in one's ability to control health has been related to active coping strategies and to lower levels of psychological distress in a correlation study of chronic patients.[9] It has also been associated with greater benefits from treatment in a prospective study[10] of individuals with chronic or recurrent low back pain. A lack of perceived control over health was found to predict prolonged sick leave when combined with other variables in a prospective study of sub-acute patients.[11] However, prospective studies of asymptomatic individuals found no predictive value for belief in control over one's health.[12,13]

General health beliefs about control may be less helpful in acute low back pain than specific beliefs in one's ability to control pain and function, such as self-efficacy. This is an area that requires further research. However, in prospective studies of chronic low back pain patients, self-efficacy beliefs about function predicted actual behaviour[14,15] and, therefore, may be an important determinant of disability. One study of chronic patients indicated that self-efficacy beliefs about pain had no relationship to functional performance.[14–16] However, others have found this variable to be predictive.[17–19]

It may be concluded that increasing perceptions of control and self-efficacy may have beneficial effects. Providing patients with self-care techniques and the encouragement they need to use them can increase psychological well-being, improve adherence and result in good outcomes.

Medical costs

Different estimates of the cost of NSLBP have been reported. However, the range is estimated to be between $25 million to $25 billion per year in direct costs and $50 billion to more than $100 billion for the total cost in the USA.[20] Medical costs comprise a large percentage of these costs.[6,21,22] Guidelines are intended to reduce costs. However, there is no empirical support for this yet. Medical costs such as medical visits, hospitalization, rehabilitation and/or diagnostics for NSLBP may be reduced by promoting self-care that is consistent with guidelines, since self-care implies fewer visits to health care professionals. Whether or not this is true is a matter for future research.

WHAT ARE SELF-CARE TECHNIQUES?

Self-care techniques are techniques that individuals can use independently, without the help of a health care professional. Self-care techniques include oral medication, physical activity and modalities and mind–body techniques. Guideline recommendations are aimed at health care providers who treat low back pain and are not often read by patients. The following is information that may be given to patients to encourage self-care. The techniques here are limited to methods that can be easily described by the health care provider and implemented by the individual.

Medication

According to recent guidelines for the management of acute low back pain[1,2] acetaminophen (paracetamol) as an OTC pharmaceutical is recommended as the first choice for treatment. Besides being prescription-free and inexpensive, acetaminophen has a low potential for side effects at usual doses.[1,23] In comparison, non-steroidal anti-inflammatory drugs (NSAIDs) such as the prescription-free acetylsalicylic acid (Aspirin®) or the prescription-bound diclofenac or ibuprofen have a number of potential side effects, particularly gastrointestinal complications, which also occur but at a lower incidence rate in the new cyclo-oxygenase-2 inhibitors such as celecoxib.[24] The other commonly used drugs for low back pain, muscle relaxants (which are generally prescription-bound) and opioid analgesics (prescription-bound), may cause drowsiness, physical dependence (only opioids), decreased reaction time and clouded judgement.[1,2]

Patients should be advised to use acetaminophen at regular intervals and usual doses for acute non-specific low back pain. It is a safe and inexpensive drug and with its over-the-counter availability, it is least likely to encourage 'medicalization' of the low back problem, since it does not necessitate visits to the treating physician to obtain a prescription. If acetaminophen does not provide adequate pain control, NSAIDs may be used as a replacement, but side effects, patients' age and co-morbidities as well as the costs must be taken into consideration. Due to their side effects and potential complications, muscle relaxants and, in particular, opioids should only be used as a short-course treatment (less than 1–2 weeks) if the other two possibilities do not achieve adequate pain relief. An extensive review of the use of medication for low back pain has been published elsewhere.[25]

Empirical support

Literature reviews[2,26,27] have shown that acetaminophen is comparable to NSAIDs, which are effective in reducing back pain. Different types of NSAIDs are equally effective.[28] Muscle relaxants and opioids are an additional option, but have not been shown to be more effective than the other, safer drugs. The use of other oral medication such as anti-depressants and corticosteroids is not recommended for the treatment of acute low back pain.

Physical activities and modalities

Activity

The Paris Task Force[3] scrutinized six randomized controlled trials (RCTs)[29–34] of acceptable to excellent quality. They found that exercise prescription during the first

week of acute NSLBP is not indicated. In fact, they stated 'The prescription of active physical exercises or re-education is contraindicated in the *first week* of acute low back pain and sciatica. Dynamic, active exercises, in particular are contraindicated'.[3] This recommendation is consistent with the concept of resuming normal activities gradually. However, there are some caveats to this recommendation. The six RCTs appraised acute NSLBP of no more than 7 days duration. Three of the studies of high quality[30,31,33] clearly demonstrated the ineffectiveness of prescribed exercise in the treatment of acute NSLBP. In the three other studies[29,32,34] exercise was somewhat effective but only under certain conditions and in certain patient groups. In general, the evidence was stronger for maintaining activity than for prescribing specific exercises during the acute phase of NSLBP.

A mobility scale has been developed by the Paris Task Force (Table 1).[3] It assesses activities such as walking, sitting, standing, lying down, going up and down stairs, getting into a car and using public transportation. The scale contains quantitative and qualitative activity descriptions and can be useful in managing a progressive return to normal activity. The validity and reliability of the scale has not yet been established. However, it may be useful for assessing the patient's progress.

Bedrest

Bedrest and inactivity have been shown to be detrimental for patients. They promote muscle atrophy, cardiorespiratory deconditioning, bone mineral loss and a sense of being seriously ill.[35] The Paris Task Force recommendation for patients with acute NSLBP is: 'Patients must be strongly encouraged to maintain or resume their normal activities as far as the pain allows'.[3] This statement is strongly supported by experts in the primary care, rheumatology, surgical and physical therapy fields.[3,25,28]

Exercises

After 4 weeks of NSLBP, exercises have been shown to be effective in conjunction with a behavioural approach.[36,37] The same holds true for the patient with intermittent or recurrent low back pain. A variety of exercises have been studied in a small number of RCTs for patients with NSLBP. They include flexion/extension exercises for the trunk, various dynamic exercises, aerobics, stretching, Williams method, McKenzie style exercises, isometric exercises and walking and jogging.[3] There is no evidence that one type of exercise achieves a better outcome than another type of exercise in the treatment of subacute NSLBP. However, more research is needed. The important thing to remember is to encourage the exercise and activity that the patient prefers.

Most specific exercise techniques require some instruction and training from a specialist such as a physical therapist. A general exercise programme that combines aerobic training, stretching and strengthening exercises can be easily taught as part of self-care. However, little is known about establishing the exact parameters for intensity, duration and frequency of exercises for the patient with non-acute NSLBP. The type of exercise prescribed is often dependent on the training and preferences of the provider and may vary considerably. For example, some therapists advocate the use of weights and aerobic training, while others endorse movement therapies. Since the clinical examination of a patient with NSLBP rarely indicates specific findings, a general fitness programme of any type is usually safe. The following guidelines are recommended for a disease-free, sedentary population and can be used for a patient interested in self-care who is in the sub-acute stage of NSLBP.

Table 1. Graded scale of mobility-related activities based on selected functional and quality-of-life indices from the literature.

Activity	Quantitative description	Qualitative description
Walking	• More than 10, 20 or 30 min, several consecutive hours • Several meters, several hundred meters, several kilometers	• Ability to walk for a short/long time • Ability to walk for a short/long time
Sitting	• Needing to remain seated for most of the day • Remaining seated for more than 10, 30, 60 min or for more than several consecutive answers	• Need support for oneself to get up, have difficulty to get up • Sitting in a favourite chair, ability to sit in any chair
Standing	• 10 min, 20–30 min, more than 30 min, more than 1 hour	• For prolonged periods, for as long as one desires
Lying down and getting up	Not applicable	• Have difficulty getting into bed, turning over in bed, getting out of bed
Staying in bed	• Number of hours • Number of days	• Lying down most of the time or more than normal • Not lying down to rest
Climbing stairs	• Five steps, 1 storey, several storeys	• Using a banister, climbing more slowly
Transportation	• Travelling less than 30 min, less than 1 hour, more than 2 hours	• Travelling in cars, travelling anywhere

Source : Abenhaim et al.[3]

A walking programme

Aerobic training (cardiorespiratory endurance) can be achieved through a walking programme, brisk walking, jogging, or stair climbing. Such a programme is easy to do and does not require special equipment. The guidelines for cardiorespiratory training for a population with no underlying diseases are the following: engaging in activities that will require moderate intensity (40–60% of functional capacity) within a duration of 20–30 minutes. The recommended frequency is at least three times per week.[38]

Self-care monitoring

One way of controlling the intensity of the exercises is to monitor the heart rate. Wrist watch heart monitors may be used. Teaching the patients how to monitor their heart rate through pulse can be difficult. An alternative way to monitor the amount of effort is by instructing patients in the use of a perceived exertion scale.[39] One such scale is the Borg Scale, which will be used for illustrative purposes. Maintaining effort at a level of 12 on the Borg Scale (indicating a heart rate of approximately 120 beats/minute in a normal healthy population in active age (30–40 years old) is safe and provides the aerobic benefit desired. Patients should be instructed to increase their pace or distance to maintain the same effort as the exercise progresses.

Flexibility

Flexibility is the ability to move a joint through a range of motion[38] and may be achieved by a stretching programme. Flexibility exercises usually require 3–5 repetitions of dynamic movement with a static stretch to be held for 10–30 seconds. Stretches should be done two to three times per week (see Table 2).[38]

Strengthening exercises

Strength may be thought of as the ability of a muscle or a muscle group to overcome resistance. Strengthening exercises are a major component in the rehabilitation of patients with low back pain. They usually consist of body weight resistance against gravity, machines, free weights and elastic band resistance.

Activity limitations

Commonly the health care practitioner will recommend against certain activities. These recommendations are usually based on the patient's symptoms, activity requirements, such as work tasks, and the practitioner's beliefs. Biomechanical and epidemiological studies have underlined the fact that lifting, awkward positions and exposure to whole body vibration increase reporting of low back pain and therefore should be avoided during an episode of acute low back pain. However, gradually returning to normal activities seems to have better long-term outcome for the patient than 'avoidance' recommendations.[33]

Fear of movement

Fear of movement is common among patients with acute NSLBP.[6] It is natural for patients to associate hurt with harm. Explaining the difference between these concepts in NSLBP is crucial for a good outcome.

Table 2. Exercise and modalities for self-care.

• Modalities	Hot packs Cold packs	10–20 min As often as needed
• Flexibility exercise	Lower extremity (hamstring, hip flexors, hip extensors 1. Supine 2. Sitting 3. Standing Back muscles (back extensors) 1. Kneeling = quadruped position 2. Standing Knee to chest 1. Supine	3–5 repetitions holding time: 15 to 30 seconds done 2–3 times per week
• Strengthening exercises	Active back extension 1. Prone 2. Prone leaning on gym ball Abdominal strengthening 1. Supine Pelvic tilt 1. Supine 2. Sitting 3. Standing	1–3 sets of 8–12 repetitions done 2–3 times per week
• Aerobic conditioning	Walking programme 1. Outdoor/indoor track 2. Treadmill Stationary bike 1. Recumbent 2. Upright	20–30 min, 3 times per week

This protocol can be safely recommended to patients.

One simple way to detect fear of movement is to ask the patient directly. For example you may ask 'Do you think movement will harm you?' Another way is to use standardized scales such as The Fear Avoidance Beliefs Questionnaire.[6] If the patient is resistant to changing beliefs about movement a referral to a pain specialist or psychologist may be appropriate.[3,40]

Modalities

The most commonly used physical modalities that patients can use on their own to treat low back pain include electrotherapy transcutaneous electrical nerve stimulation (TENS), therapeutic heat (superficial heat), therapeutic cold (cold packs, sprays), massage and magnetic therapy.[41]

There is no proof that modalities improve the outcome of low back pain.[1] However, as a source of short-term relief and as an aid for activity resumption some of them, such as moist heat and ice can be easily taught to the patient. It is important that patients understand that these modalities are for controlling symptoms only and that an active approach will provide the best outcome.[42]

Modalities that can be safely recommended for self-care to patients are: hot packs or cold packs for 20–30 minutes as needed for pain relief. Or, patients should be advised to

follow the heating or cooling directions of the manufacturer. Vapocoolant sprays, e.g. ethyl chloride, require local application and can be used in combination with stretching exercises.[41]

In summary, if the benefits and limitations of modalities are explained to the patient they can be used easily and safely. Patients should be encouraged to use modalities as part of an active approach to NSLBP.

Mind–body techniques

The introduction of the Gate Control Theory and biopsychosocial model to the problem of low back pain and disability has resulted in an understanding of pain as a multidimensional experience. Pain may be modulated by stress, beliefs, mood and attention.[4] A number of simple self-help techniques exist that address the mind–body connection in low back pain. They usually fall under the heading of cognitive-behavioural interventions. The easiest to learn independently are relaxation and creative visualization or imagery.

Relaxation for self care

Stress has been implicated as a cause of low back pain for several reasons. Perceived tension results in the activation of the sympathetic nervous system that causes muscles to tighten. This can result in painful spasms, ischaemia and vulnerability to injury during movement due to muscle contraction. Stress is associated with negative mood states that enhance pain perception such as depression and anxiety.[43] Stress can also affect work habits by causing workers to assume repetitive and constrained postures without sufficient rest breaks. This can result in cumulative trauma injuries.

The most common mind–body technique for low back pain is relaxation. All relaxation exercises involve relaxed breathing and focused attention on a neutral or pleasant stimulus (Tables 3 and 4). Relaxation exercises evoke the 'relaxation response' in the parasympathetic nervous system and counteract the effects of the stress response.[44]

Many relaxation techniques exist. Meditation, self-hypnosis, forms of yoga and other movement therapies and progressive muscle relaxation (Table 5) are all good examples. Patients may be encouraged to practise the one they feel most comfortable with. Deep breathing with progressive muscle relaxation is one of the simplest forms of relaxation and can be instructed as shown.

Table 3. Deep breathing.

Deep breathing is the common thread in all relaxation techniques. It reflects the absence of tension. Initiating deep breathing provokes the parasympathetic reaction consonant with relaxation.

- Breathe deeply from your diaphragm. Avoid shallow chest breathing.
- Inhale through your nose and exhale through your mouth.
- As you inhale, let your stomach expand. As you exhale, let it contract.
- Practise controlling the speed at which you breathe. Breathe slowly but naturally.
- Allow your mind to focus on your breathing instead of negative thoughts or feelings.

Deep breathing may be practised alone or as an introduction to other relaxation techniques.

Table 4. Creative visualization.

- Relaxation exercises work well with creative visualization or imagery. These exercises tap into the mind–body connection by purposely creating pleasant mental images that promote salubrious physical responses. Visualizations can have a motivational effect as well. Imagining an achieved goal can motivate the individual to adopt the behaviours necessary to meet that challenge. Creative visualization can be taught as follows: The success of creative visualization is based on your ability to make the images as real as possible, so that your body behaves as if they are true. Think about the last time you had a very vivid dream. When you awoke, your body probably felt like the dream really happened Applying this approach while you're awake requires the use of all 5 senses and some practice. One popular image among pain sufferers is a golden healing light. Here is a creative visualization exercise using healing light.

1. Imagine the beautiful golden colour and the warmth of the light.
2. As you inhale, allow the light to enter the body, healing and soothing any area in pain or discomfort.
3. As you exhale, let the light leave your body through the skin, removing pain and tension. You may use any other image that you find relaxing as well.

It can also be helpful to imagine yourself exactly the way you want to look and feel. See yourself doing all the things you want to do in perfect health. This image of yourself can move you closer to achieving your goals.

Table 5. Progressive muscle relaxation.

Progressive muscle relaxation (PMR) is a systematic method of tightening and releasing muscles to reduce muscle tension. PMR helps you to relax by focusing your attention on different muscle groups.

1. Get in a comfortable position, either sitting or lying down.
2. Find a quiet place where you know you will not be interrupted for about 20 minutes.
3. Wear comfortable clothing.
4. Close your eyes.
5. Take 3 deep, slow relaxing breaths. Maintain this slow, deep breathing throughout your progressive muscle relaxation.
6. When you exhale, tell yourself to 'relax' or 'let go'.
7. Tense each muscle group and hold for about 5 seconds.
8. Go slowly, muscle group by muscle group.
9. Start with your forehead, then your face, your neck, your shoulders etc.
10. Move slowly down your body until you reach your toes.
11. After you are completely relaxed, scan your body mentally. If you come across any tension spots, repeat the tensing and releasing in that area.
12. Keep going until you feel fully relaxed.
13. Keep your eyes closed and just enjoy feeling totally relaxed.
14. Before you open your eyes, picture your surroundings. Wiggle your fingers and toes. When you feel comfortable, open your eyes.

Practise this technique at least once a day.

Empirical support

In a review of randomized controlled studies, van Tulder et al[45] found strong evidence that behavioural treatment has a small to moderate effect on outcome in chronic low back pain when compared to no treatment, but virtually no effect when added to other

treatments. However, few high quality studies exist and it is suggested that patients at risk may benefit from cognitive behaviour treatment earlier in a low back pain episode.

In a prospective randomized study Hasenbring et al[46] compared psychological intervention including relaxation techniques to usual medical care in acute back pain patients. They found a positive effect of these techniques, especially in the group of patients deemed to be at high risk for chronicity based on psychological risk factors that were assessed at baseline. In fact, patients in the intervention groups did as well as the low risk patients at follow-up.

Linton & Andersson[47] conducted a randomized controlled study that compared cognitive-behavioural intervention with the provision of information to patients. Patients in the treatment group received 6 sessions of cognitive-behavioural intervention, including relaxation training. The comparison groups received either a pamphlet or an extensive information packet. While all groups improved, the cognitive-behavioural group had significantly lower levels of perceived risk of chronicity and health care use and was much less likely to be out of work long-term.

There are several limitations of current research. Few randomized controlled studies on acute low back pain exist. This makes it difficult to assess the effectiveness of mind–body techniques in the early stages of low back pain. A related problem is the fact that there are no studies that have compared relaxation or creative visualization alone to other treatments. Cognitive-behaviour interventions that include relaxation and imagery are typically compared to other treatments by themselves or as part of a multidisciplinary intervention. Therefore, the effective component of the treatment is not known. Finally, existing studies have examined interventions that require several sessions with a health care provider. Repeated cognitive-behavioural interventions may increase perceptions of control and motivate self-care behaviours. However, the focus of this chapter is self-care techniques that patients can use without the help of a health care provider. These have not been studied.

Despite the lack of research to support mind–body techniques in the self-care of acute low back pain, they are highly recommended for the following reasons. The cost of these exercises is low, they are easy to learn and can be done anywhere with no special equipment. In addition, the evidence from the chronic low back pain literature suggests that the benefits are potentially high for low back pain outcomes. These techniques may have generalized health benefits as well.

Improving the odds of success

Patients want information about the likely course of their low back pain, the associated activity limitations, how to manage their back pain, how to return to normal activities as soon as possible, and how to avoid or deal with recurrences.[6,48] Appropriate information and advice can reduce anxiety and improve patient satisfaction with care.[1,2,49]

Waddell[6] suggested that the same advice should be given from all members of the health care team and should reflect clinical guidelines and any patient information sheets. Waddell & Burton's[4] recommendations are listed in Table 6.

Certain ways of interacting may promote the concept of self-care better than others and may avoid iatrogenic complications. The first encounter with a health care professional is most important, since it is an opportunity to build trust in the patient–health care provider 'team'. If trust is established, the patient is more likely to accept the prognosis and the recommended course of treatment. Information should be evidence-based as often as possible, communicated in several ways (verbal, handouts,

Table 6. Communication to patients.

- Reassure them that there is no serious damage or disease.
- Explain that back pain is a symptom that the back 'is not working properly'.
- Avoid labelling as injury, disc trouble, degeneration, or wear and tear.
- Reassure patient that natural history is good providing you stay active, but with accurate information about recurrent symptoms and how to deal with them.
- Advise patients to use simple, safe treatments to control symptoms.
- Encourage staying active, continuing daily activities as normally as possible and staying at work. This gives the most rapid and complete recovery and less risk of recurrent problems.
- Avoid the 'let pain be your guide' idea.
- Encourage patients to take responsibility for their own continued management.

Adapted from Waddell.[6]

brochures, video tape, internet site, referral to back education, other means) and repeated by the health care providing team. The same message must be provided by the physician, chiropractor, physical therapist, nurse and others involved.

Patients should be encouraged to form a partnership with the health care provider.[8] This means that it is understood that the patient has equal responsibility for the outcome of treatment with the provider. Today, patients have access to more information from non-traditional sources such as the internet or alternative care practitioners than in years past. The health care provider must be willing to discuss the patient's questions and concerns.[6,50] Patients' belief about their condition and the proposed course of treatment must be taken very seriously since it can affect compliance and satisfaction with care and ultimately the outcome.[49]

Empirical support

Moore et al[7] conducted a large RCT to evaluate a brief intervention for primary care back pain patients. The intervention consisted of accurate information about back pain, suggestions for self-care, reduction of fears and worries, and the development of personalized action plans for pain management. They found that the intervention group showed significantly greater reductions in back-related worry and fear-avoidance beliefs as well as in pain ratings and interference with activities compared to the control group that received usual care.

LIMITATIONS OF SELF-CARE TECHNIQUES

Adherence to health care practitioner recommendations is a challenge in many treatment protocols. This is especially true for self-care treatment. Passive medical interventions have the advantage of ensuring a certain level of intervention if the patient merely attends the sessions. It is much more difficult to monitor adherence in self-care. In addition, some studies suggest that patients tend to adhere more to prescribed exercises when they are supervised.[10,51,52]

Patients may have difficulty with self-care for a variety of reasons. One is that the health care provider has failed to convince the patient that self-care is as, or more, effective than traditional treatment in acute NSLBP episodes. In some cases, it may be

impossible to convince patients that they have non-specific low back pain. Despite reassurance and education, some patients remain convinced that there is a structural problem in their back that needs to be 'fixed' for them to feel better. The idea that back pain is not serious and requires no special treatment is a new concept for many individuals. The initial health care provider–patient interaction is critical in determining the extent to which the patient will be able to accept responsibility for their low back pain.

Some patients may have difficulty with self-care because of deeply entrenched beliefs in the power of modern medicine to cure them. Attempts to shift the control to the patient may backfire and result in feelings of rejection, confusion and anger on the patient's part. For these patients, evidence-based treatment by the health care provider may be the best approach to a positive outcome.

Finally, even patients who believe that their back pain is self-limiting and not serious may still desire immediate pain relief by means of passive modalities such as manipulation, massage, injections, electrotherapy, hot or cold packs, magnetic therapy or acupuncture. As long as these methods are not contraindicated, they should not be discouraged. However, it can be emphasized that self-care is an important adjunct to any passive treatment.

It is important to remember that no intervention works for everybody. Even evidence-based treatment recommendations are not a substitute for common sense and individualized assessment. Self-care should be encouraged. However, responding to the patient's needs should always be paramount.

CONCLUSIONS

Guidelines recommend minimal intervention in the early stages of low back pain. Yet patients often seek medical care in cases of NSLBP that do not resolve quickly. In response to this request, health care providers may 'over treat' patients at the expense of their well-being. It is suggested that health care providers shift their emphasis to educating patients to care for back pain on their own. This can be accomplished by improving communication with patients, engaging them as partners in health care and encouraging simple self-care techniques. This may be an important step in curtailing the exorbitant costs and the pain and suffering that result from NSLBP.

Practice points

- deep breathing is the common thread in all relaxation techniques
- relaxation exercises work well with creative visualization or imagery
- progressive muscle relaxation can be used to help the patient to relax
- communication with the patient is vitally important
- there is strong evidence against recommending bedrest for acute non-specific back pain
- there is strong evidence for recommending the maintenance or resumption of gradual activity in an episode of acute non-specific back pain for long term well being

Research agenda

- better predictors indicating individuals with acute non-specific low back pain at high risk for chronicity and disability are needed
- the evidence for the effectiveness of exercise in the treatment of and prevention of acute NSLBP is not well established
- the type, amount and frequency of exercises and their relationship to outcome of NSLBP is not well established
- research is needed on how to educate patients about the mind-body connection
- research is needed on how to assess the importance of visualization in relaxation practices
- a comparison of the effectiveness of different types of mind–body approaches to low back pain is needed
- how to communicate more effectively to the patient with acute non specific low back pain that the best treatment is staying active needs to be carefully assessed
- how to better convince primary health care providers to communicate that the best treatment for the patient with acute non specific low back pain is to stay active also needs to be investigated

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